V. *A Letter from Mr.* Triewald, *Director of Mechanicks to the King of* Sweden, *and F. R. SS. of* England *and* Sweden, *to Sir* Hans Sloane, *Bar^t. Preſ. R. S. relating to an extraordinary Inſtance of the almoſt inſtantaneous* freezing of Water; *and giving an Account of* Tulips, *and ſuch* bulbous Plants, *flowering much ſooner when their Bulbs are placed upon Bottles filled with Water, as in* TAB. II. *than when planted in the Ground.*

Moſt honoured SIR,

I HAVE at preſent to communicate to you a ſomewhat ſtrange Accident, which produced as unexpected a Phænomenon. The 15th of *December* laſt coming into the Hall, where my *Apparatus* is placed, in the Palace of the Nobility at *Stockholm*, the Weather being very cold, I feared that the Glaſs for ſhewing the Experiment with the *Carteſian Devils* (or thoſe glaſs Figures in Water, which by the Preſſure of the Air on the Surface of the Water, are made to change their Places, and ſink to the Bottom of the Glaſs) would be in Danger, if the Water ſhould freeze in the ſame. I took it down from the Shelf, and was well pleaſed to ſee the Water in a fluid State; but before I would empty the Glaſs, as ſome Friends that were preſent had not ſeen that Experiment, I placed my Hand on the Bladder tied on the Top of this Cylindrical Glaſs, which was of a pretty large Size, ſixteen

Inches high, and three Inches and a half Diameter, containing three glaſs Figures: In that very Inſtant, and in the Space of a Second of Time, I found all the Water changed into Ice; when in that Time two of the Figures had reached very near the Bottom, but the third, as well as they, fixed in the Middle of the Glaſs, ſurrounded with Ice as tranſparent as the Water itſelf before it congealed. This is, in a few Words, the Matter of Fact; but the Reaſon why the whole Body of Water, in ſuch a ſhort Space of Time, ſhould turn into Ice, is, in my humble Opinion, not ſo eaſily to be accounted for; and rather than offer any Solution of mine, ſhall leave the ſame to that ingenious Gentleman Dr. *Deſaguliers.*

In *September* laſt I placed ſome Leeks of *Tulips*, and other Flowers, after ſuch a manner in Water as the Figures in TAB. II. repreſent; at which Time I put into each Glaſs two Grains of *Saltpetre.* Theſe Glaſſes I kept in my Study, ſometimes on a Shelf, at other times before the Window. In a Fortnight's Time I begun to find that they ſtruck new Roots; the latter End of *November* they put forth Leaves, and in *January* they all flowered, as well as if they had been on a Garden-bed; whereas in Gardens we ſeldom ſee, in this Country, *Tulips* before the latter End of *May*, and this Year ſcarce ſo ſoon, the Ground being yet covered with Abundance of Ice and Snow.

Though theſe Experiments ſeem to be calculated for nothing but Delight, yet I think they have furniſhed me with ſome Lights, as to the Riſe of the Sap in Plants, which I will forbear mentioning till the

the next Winter gives me an Opportunity of reiterating thoſe and ſome other Experiments.

I am, with the higheſt Eſteem and Reſpect,

Moſt Honoured SIR,

Stockholm, April the 4th, 1730.

Your moſt Obedient and moſt Humble Servant,

FR. TRIEWALD.

VI. *An Account of ſome Experiments, relating to the Flowering of* Tulips, Narciſſus's, &c. *in Winter, by placing their Bulbs upon Glaſſes of Water, made by Monſ.* Triewald, *Director of Mechanicks at* Stockholm, *and F. R. SS. of* England *and* Sweden, *and read before the* Royal Society May *the 7th, 1730, as they were tried the next Seaſon by* Philip Miller, *F. R. S. Gardiner to the worſhipful Company of* Apothecaries, *at their Botanick Garden in* Chelſea.

THE Glaſſes marked Numb. 1, were Roots of a *Hyacinth*, commonly known by the Name of *Pulchra*. Numb. 2. were Roots of the common *Oriental blue Hyacinth*. The Flowers of theſe were

Tab. II.